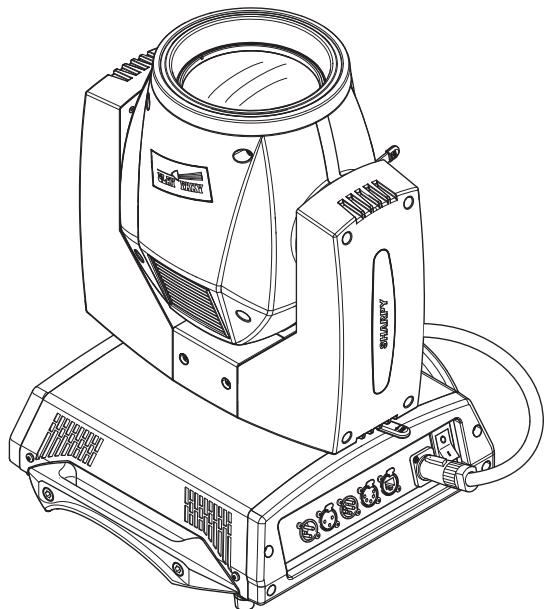


## INSTRUCTION MANUAL



### INDEX

Page	Contents
2	Safety information
3	Unpacking and preparation
4	Installation and start-up
5	Control panel
7	Menu setting
14	Maintenance
20	Optional accessories
21	Technical information
21	Cause and solution of problems
22	Channel functions

*Congratulations on choosing a Clay Paky product!*

*We thank you for your custom.*

*Please note that this product, as all the others in the rich Clay Paky range, has been designed and made with total quality to ensure excellent performance and best meet your expectations and requirements.*

Carefully read this instruction manual in its entirety and keep it safe for future reference. It is essential to know the information and comply with the instructions given in this manual to ensure the fitting is installed, used and serviced correctly and safely.

CLAY PAKY S.p.A. disclaims all liability for damage to the fitting or to other property or persons deriving from installation, use and maintenance that have not been carried out in conformity with this instruction manual, which must always accompany the fitting.

CLAY PAKY S.p.A. reserves the right to modify the characteristics stated in this instruction manual at any time and without prior notice.

## SAFETY INFORMATION

### • Installation

Make sure all parts for fixing the projector are in a good state of repair.

Make sure the point of anchorage is stable before positioning the projector.

The safety chain must be properly hooked onto the fitting and secured to the framework, so that, if the primary support system fails, the fitting falls as little as possible.

If the safety chain gets used, it needs to be replaced with a genuine spare.

189W 12 m



$t_a$  40°C

IP20



$t_c$  100°C



### • MINIMUM DISTANCE OF ILLUMINATED OBJECTS

The projector needs to be positioned so that the objects hit by the beam of light are at least 12 metres (39'4") from the lens of the projector.

### • Minimum distance from flammable materials

The projector must be positioned so that any flammable materials are at least 0.20 metres (8") from every point on the surface of the fitting.

### • Mounting surfaces

It is permissible to mount the fitting on normally flammable surfaces.

### • Maximum ambient temperature

Do not operate the fixture if the ambient temperature ( $T_a$ ) exceeds 40° C (104° F).

### • IP20 protection rating

The fitting is protected against penetration by solid bodies of over 12mm (0.47") in diameter (first digit 2), but not against dripping water, rain, splashes or jets of water (second digit 0).

### • Protection against electrical shock

Connection must be made to a power supply system fitted with efficient earthing (**Class I** appliance according to standard EN 60598-1).

It is, moreover, recommended to protect the supply lines of the projectors from indirect contact and/or shorting to earth by using appropriately sized residual current devices.

### • Connection to mains supply

Connection to the electricity mains must be carried out by a qualified electrical installer.

Check that the mains frequency and voltage correspond to those for which the projector is designed as given on the electrical data label.

This label also gives the input power to which you need to refer to evaluate the maximum number of fittings to connect to the electricity line, in order to avoid overloading.

### • Temperature of the external surface

The maximum temperature that can be reached on the external surface of the fitting, in a thermally steady state, is 100°C (212°F).

### • Maintenance

Before starting any maintenance work or cleaning the projector, cut off power from the mains supply.

After switching off, do not remove any parts of the fitting, to avoid getting burnt for at least 35 minutes. After this time the likelihood of the lamp exploding is virtually nil.

The fitting is designed to hold in any splinters produced by a lamp exploding. The lenses must be mounted and, if visibly damaged, they have to be replaced with genuine spares.

### • Lamp

The fitting mounts a high-pressure lamp that needs an external igniter. This igniter is fitted onto the apparatus.

- Carefully read the "operating instructions" provided by the lamp manufacturer.
- Immediately replace the lamp if damaged or deformed by heat.

### • Battery

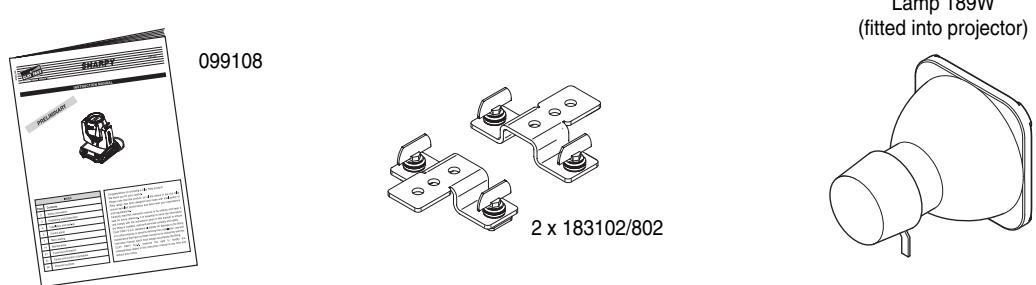
This product contains a rechargeable lead-acid battery. To preserve the environment, please dispose the battery at the end of its life according to the regulation in force. Instructions on how to remove the battery from the product are available on [www.claypaky.it](http://www.claypaky.it)

The products referred to in this manual conform to the European Community Directives to which they are subject:

- Low Voltage 2006/95/CE
- Electromagnetic Compatibility 2004/108/CE

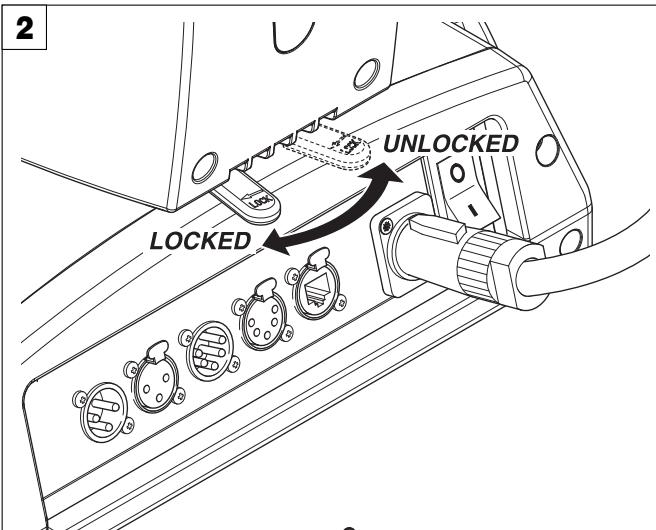
## UNPACKING AND PREPARATION

1

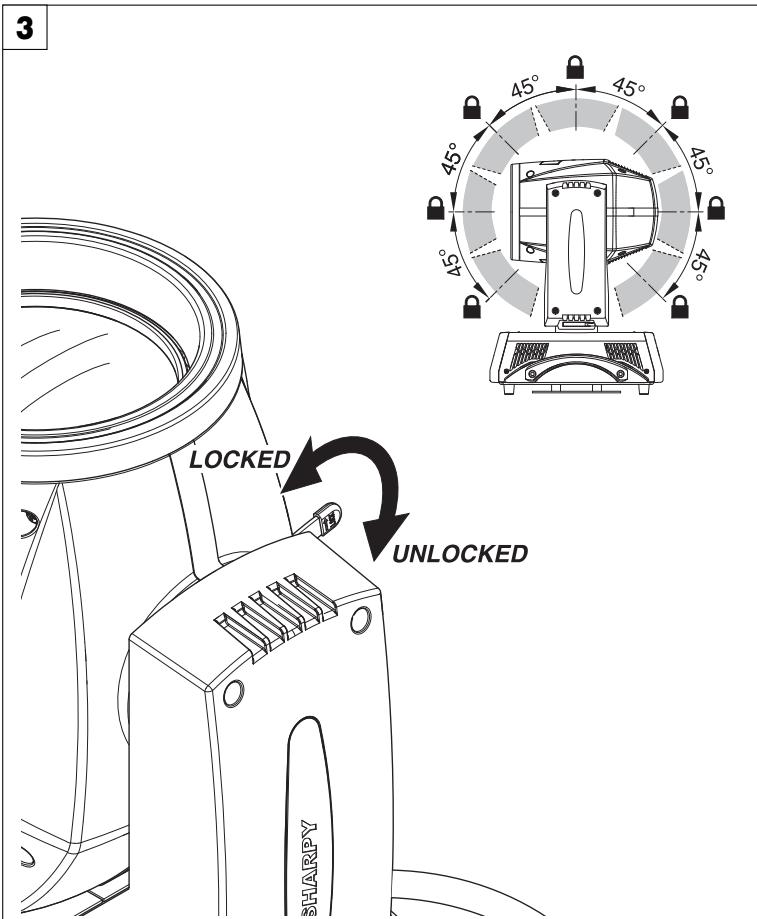


Packing contents - Fig. 1

2



3

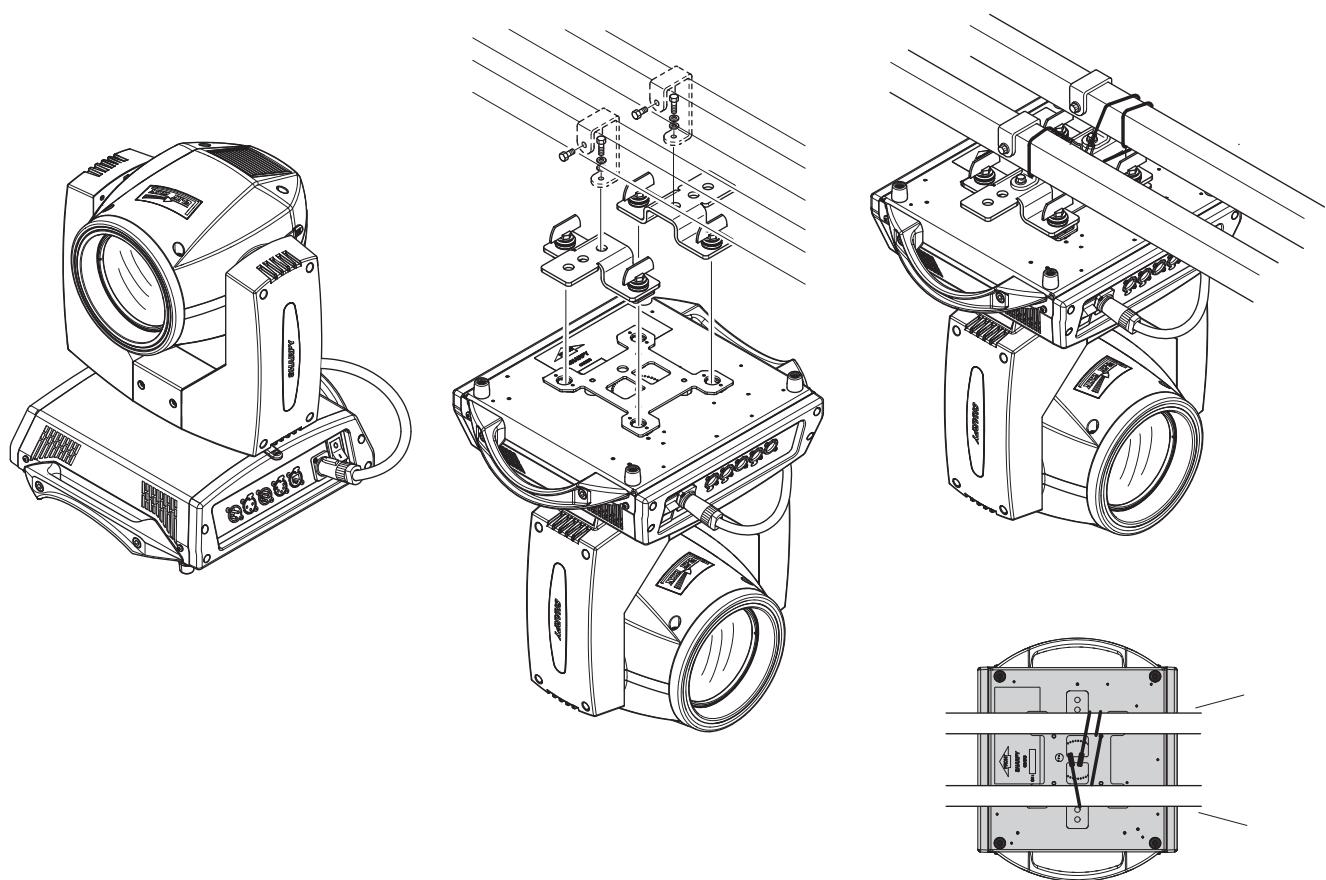


PAN Mechanism Lock and Release (every 90°) - Fig. 2

TILT Mechanism Lock and Release (every 45°) - Fig. 3

## INSTALLATION AND START-UP

4

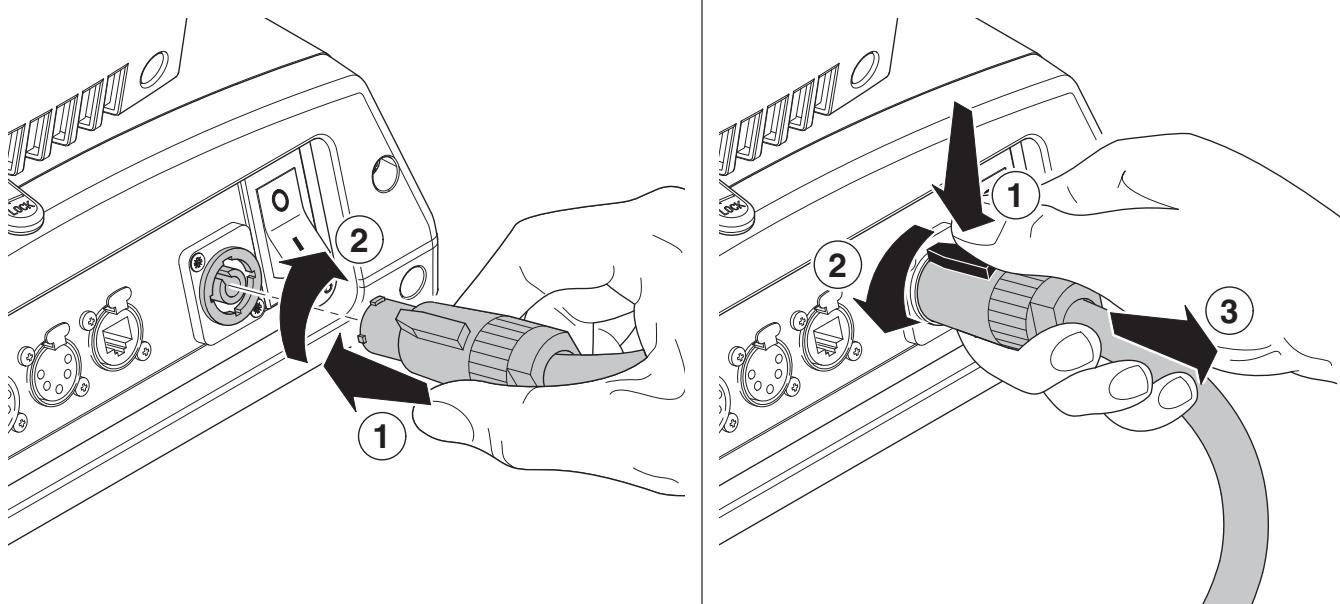


Installing the projector - Fig. 4

The projector can be installed on the floor resting on special rubber feet, on a truss or on the ceiling or wall.

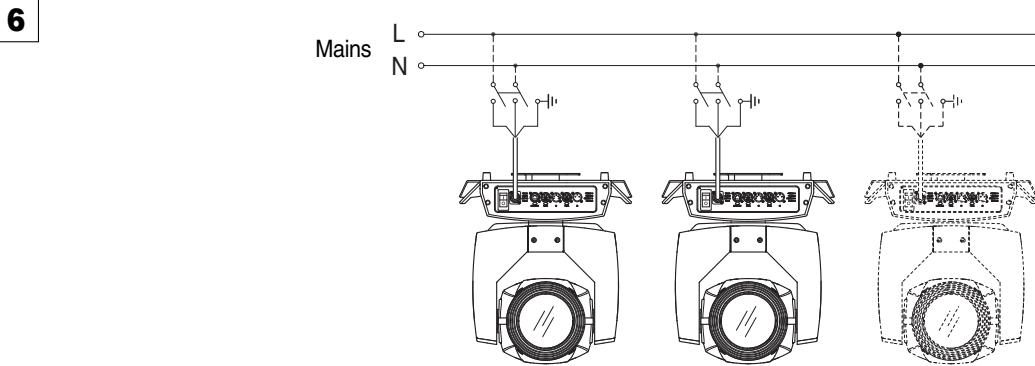
**WARNING: with the exception of when the projector is positioned on the floor, the safety cable must be fitted. (Cod. 105041/003 available on request). This must be securely fixed to the support structure of the projector and then connected to the fixing point at the centre of the base.**

5

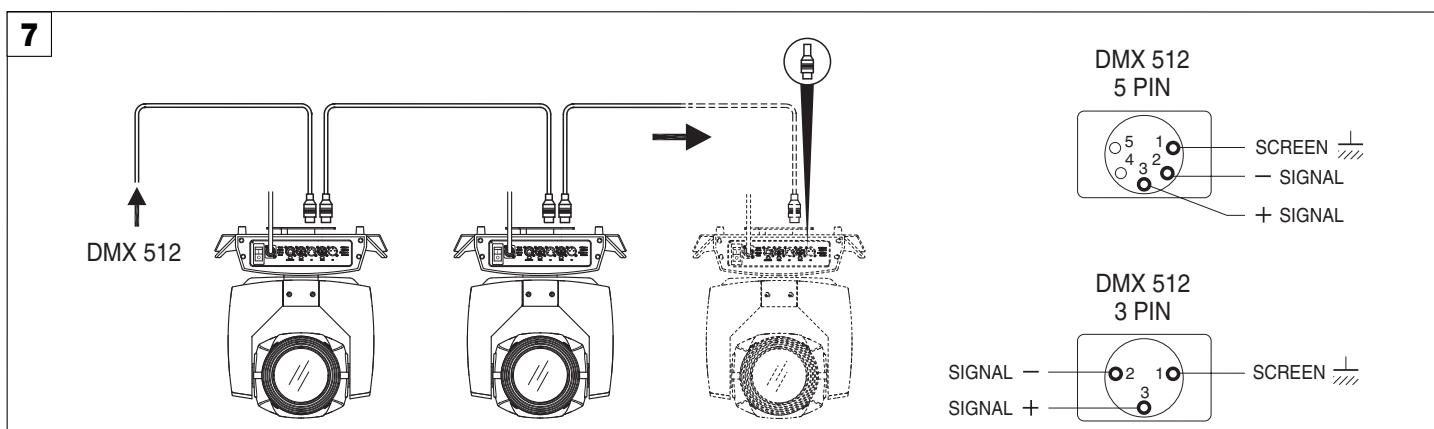


Connecting and disconnecting power cable - Fig. 5

## CONTROL PANEL



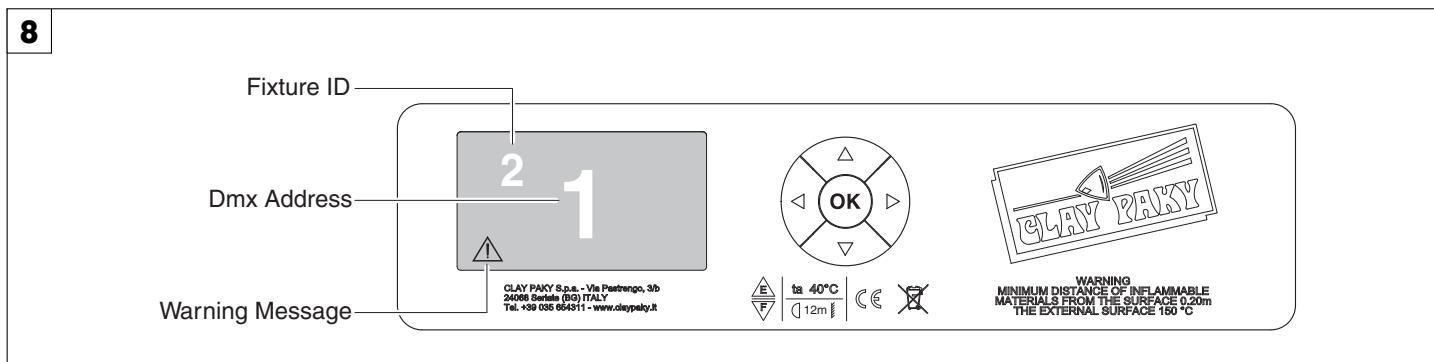
Connecting to the mains supply - Fig. 6



Connecting to the control signal line (DMX) - Fig. 7

Use a cable conforming to specifications EIA RS-485: 2-pole twisted, shielded, 120Ω characteristic impedance, 22-24 AWG, low capacity. Do not use microphone cable or other cable with characteristics differing from those specified. The end connections must be made using XLR type 3 or 5-pin male/female connectors. A terminating plug must be inserted into the last projector with a resistance of 120Ω (minimum 1/4 W) between terminals 2 and 3.

**IMPORTANT:** The wires must not make contact with each other or with the metal casing of the connectors. The casing itself must be connected to the shield braid and to pin 1 of the connectors.



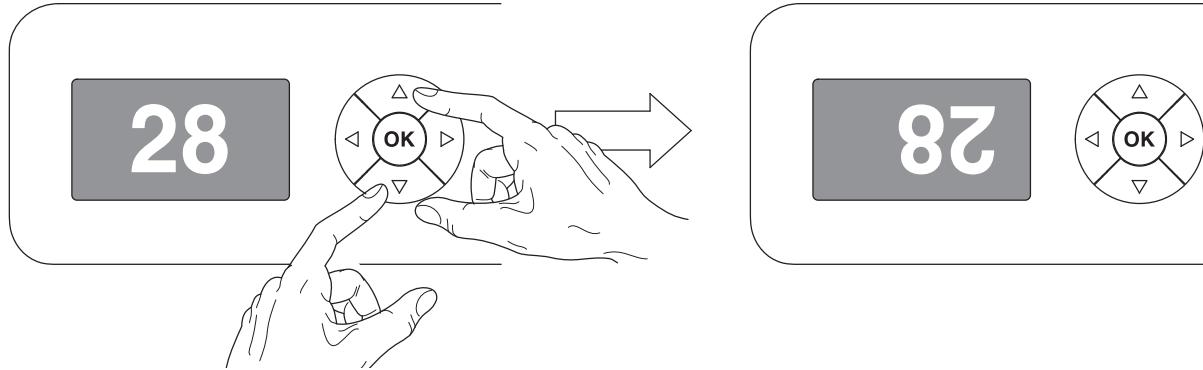
Switching on the projector - Fig. 8

Press the switch. The projector starts resetting the effects. At the same time, the following information scrolls on the display:



On conclusion of resetting in case of absence of the dmx signal, Pan and Tilt move to the "Home" position (Pan 50% - Tilt 50%). The control panel (Fig. 8) has a display and buttons for the complete programming and management of the projector menu. The display can be in one of two conditions: rest status and setting status. When it is in the rest status, the display shows the projector's DMX address and the Fixture ID address (if set).

During menu setting status, after a wait time (about 30 seconds) without any key having been pressed, the display automatically returns to rest status. It should be noted than when this condition occurs, any possible value that has been modified but not yet confirmed with the **OK** key will be cancelled.



#### Reversal of the display - Fig. 9

To activate this function, press UP and DOWN keys simultaneously while the display is in the rest mode. This status will be memorised and maintained even for the next time it will be switched on. To return to the initial state, repeat the operation all over again.

#### Setting the projector starting address

On each projector, the starting address must be set for the control signal (addresses from 1 to 512).

The address can also be set with the projector switched off.

Setting the address: see pag. 8.

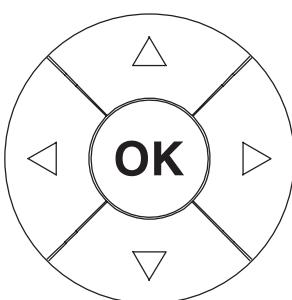
#### Setting the projector Fixture ID

On each projector, the Fixture ID address must be set for an easy identification of the fixtures in an installation (ID from 1 to 255).

The Fixture ID address can be set with the projector switched off.

Setting the Fixture ID: see pag. 8.

### Functions of the buttons - Using the menu



Confirms the displayed value, or activates the displayed function, or enters the successive menu.



Decreases the value displayed (with auto-repetitions) or passes to the next item in the menu.



Increases the value displayed (with auto-repetitions) or passes to the previous item in a menu.



Return to the top level



Commute from units, tens, hundreds, in the "Address", "Fixture ID" and "Calibration" menu.

#### USING THE MENU:

- 1) Press once – "Main Menu" appears on the display.
- 2) Use the UP and DOWN keys to select the menu to be used:
  - Setup (Setup Menu): To set the setting options.
  - Option (Option Menu): To set the operating options
  - Informations (Informations Menu): To read the counters, software version and other information.
  - Manual Control (Manual control Menu): To trigger the test and manual control functions.
  - Test (Test Menu): To check the proper functioning of effects
  - Advanced (Advanced Menu): Access to the "Advanced menu" is recommended for a trained technical personnel.
 To enable the "Advanced" see pag.13
- 3) Press to display the first item in the selected menu.
- 4) Use the UP and DOWN keys to select the MENU items.

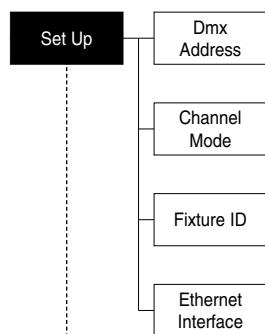
#### Setting addresses and options with the projector disconnected

The projector's DMX address, as well as other possible operating options, can also be set when the appliance is disconnected from the electricity supply. All that is needed is to press to momentarily activate the display and thus access the settings. Once the required operations have been carried out, the display will switch off again after a wait time of 30 seconds.

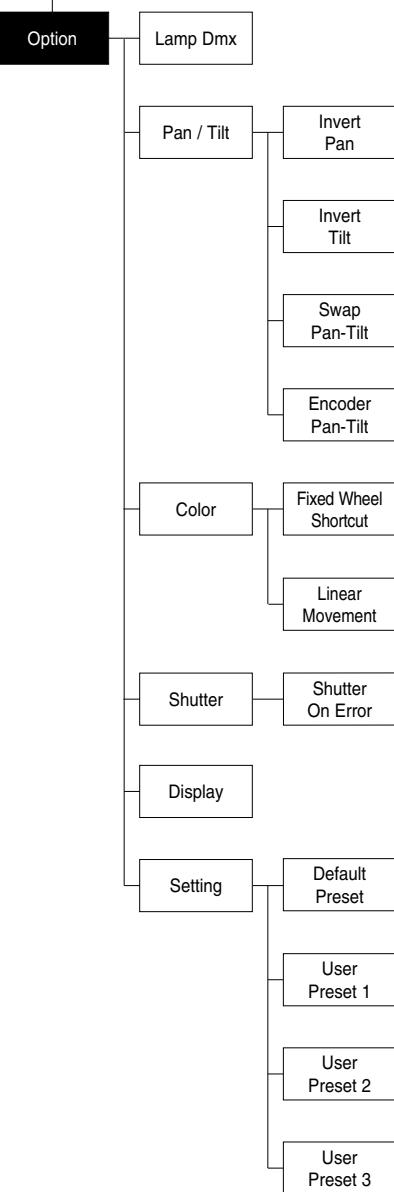
# MENU SETTING

## MAIN MENU

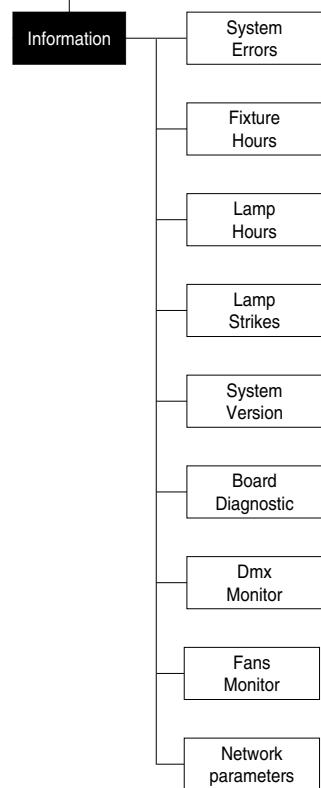
1



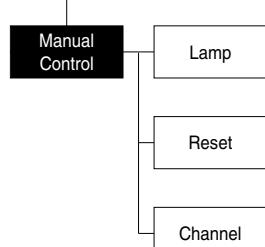
2



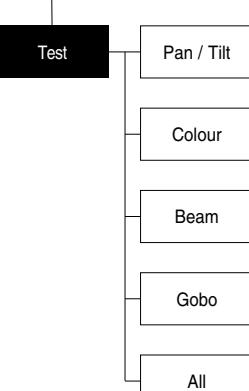
3



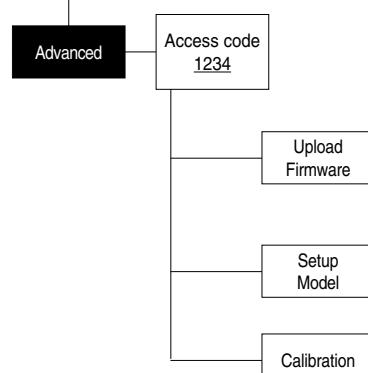
4



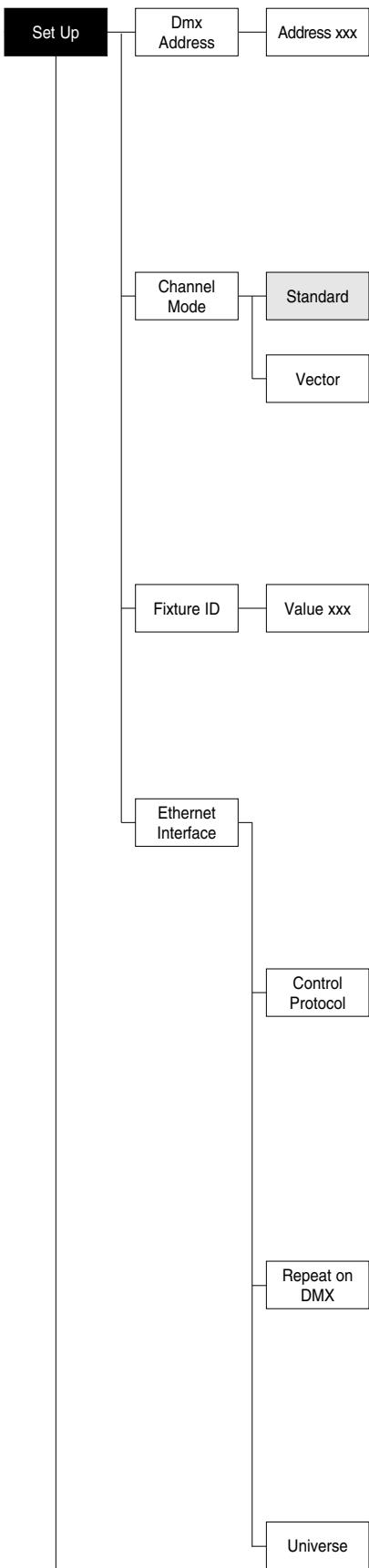
5



6



NOTE: On grey the default options



## SET UP MENU

### DMX ADDRESS

**NOTE: without the DMX signal the Address (XXX) flashing**

Allows you to select the DMX ADDRESS.

- 1) Press **OK** - the current DMX Adress appear on the display.
- 2) Use the UP **▲** and DOWN **▼**, RIGHT **▶** keys to plan the DMX Address.
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep current settings.

### CHANNEL MODE

Allows you to select a channel arrangement from the two available.

- 1) Press **OK** - the current settings appear on the display (Standard or Vector).
- 2) Use the UP **▲** and DOWN **▼** keys to select one of the following settings:
  - Standard
  - Vector
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep current settings.

### Fixture ID

Allows you to select the FIXTURE ID.

- 1) Press **OK** - the current Fixture ID appear on the display.
- 2) Use the UP **▲**, DOWN **▼**, RIGHT **▶** keys to plan the Fixture ID.
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep current settings.

### ETHERNET INTERFACE

It lets you set the Ethernet settings to be attributed to the projector.

- 1) Premere **OK**.
- 2) Use the UP **▲** and DOWN **▼** keys to select the "Ethernet Interface" options to set:

### Control Protocol

It lets you select the "Control Protocol" Art-net to assign according to the control unit used:

- 1) Press **OK** the current setting appears on the display.
- 2) Use the UP **▲** and DOWN **▼** keys to select one of the following settings:
  - Disabled
  - Art-net on IP 2
  - Art-net on IP 10
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep the current setting.

### Repeat on DMX

It lets you enable the transmission of the Ethernet protocol by DMX signal to all the connected projectors.

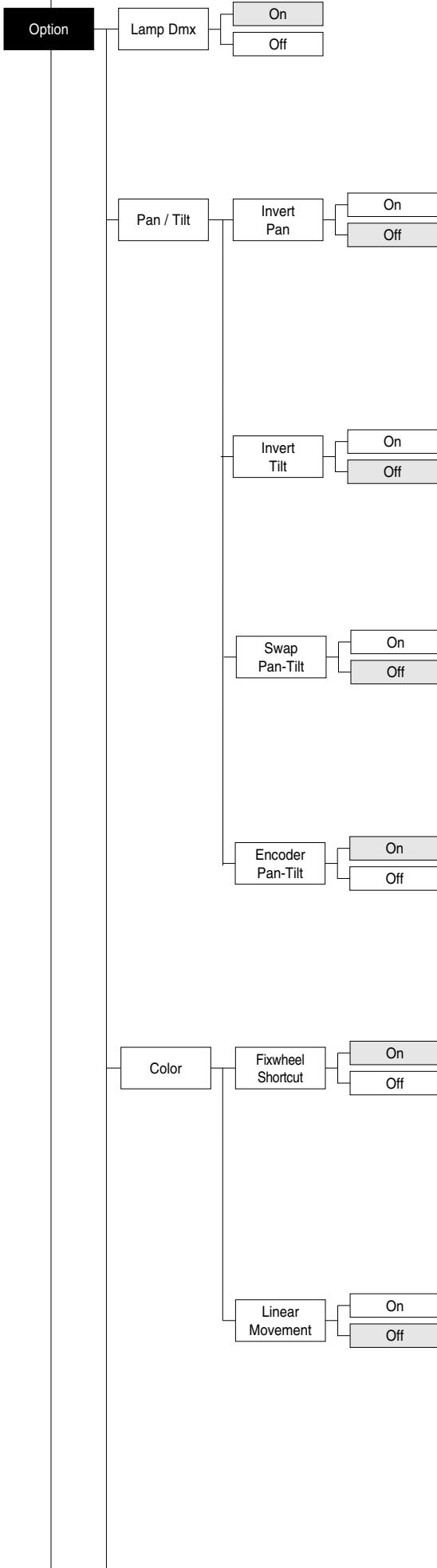
- 1) Press **OK** the current setting appears on the display.
- 2) Use the UP **▲** and DOWN **▼** keys to select one of the following settings:
  - **Disabled**: DMX transmission disabled.
  - **Enabled on primary**: DMX transmission enabled.
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep the current setting.

### Universe

It lets you assign the "Universe" number to be assigned to a series of projectors.

- 1) Press **OK** – the current Universe address appears on the display.
- 2) Use the UP **▲**, DOWN **▼**, RIGHT **▶** keys to set the Universe address.
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep the current setting.

## OPTIONS MENU



### LAMP DMX

Used for enabling lamp remote control channel.

- 1) Press **OK** - the current settings appear on the display (On or Off).
- 2) Use the UP **▲** and DOWN **▼** keys to enable (On) or disable (Off) the lamp remote control channel.
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep current settings.

### PAN / TILT

#### Invert pan

Used for reversing Pan movement.

- 1) Press **OK** - the current settings appear on the display (On or Off).
- 2) Use the UP **▲** and DOWN **▼** keys to enable (On) or disable (Off) PAN inversion.
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep current settings.

#### Invert tilt

Used for reversing tilt movement.

- 1) Press **OK** - the current settings appear on the display (On or Off).
- 2) Use the UP **▲** and DOWN **▼** keys to enable (On) or disable (Off) Tilt inversion.
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep current settings.

### Swap Pan-Tilt

Used for swapping Pan and Tilt channels (as well as Pan fine and Tilt fine).

- 1) Press **OK** - the current settings appear on the display (On or Off).
- 2) Use the UP **▲** and DOWN **▼** keys to enable (On) or disable (Off) Pan and Tilt channel swap.
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep current settings.

### Encoder Pan-Tilt

Used for enabling the Pan / Tilt encoders.

- 1) Press **OK** - the current settings appear on the display (On or Off).
- 2) Use the UP **▲** and DOWN **▼** keys to enable (On) or disable (Off) Pan / Tilt encoders.
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep current settings.

### COLOR

#### Fixed wheel short-cut

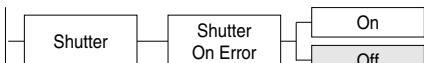
Used for optimizing color change time so that the disc turns in the direction that requires shorter movement.

- 1) Press **OK** - the current settings appear on the display (On or Off).
- 2) Use the UP **▲** and DOWN **▼** keys to enable (On) or disable (Off) color change optimization.
- 3) Press **OK** to confirm the selection, or LEFT **◀** to keep current settings.

#### Linear Movement

It enables the linear movement of the colour wheel.

- 1) Press **OK** - the current settings appear on the display (On or Off).
- 2) Use the UP **▲** and DOWN **▼** keys to enable (On) or disable (Off) the linear movement of the colour wheel.
- 3) Press **OK** to confirm the selection, or LEFT **◀** to keep current settings.

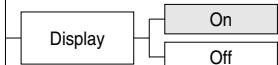


## SHUTTER

### Shutter on error

Used for automatically closing the stop/strobe in the event of Pan/Tilt position error.

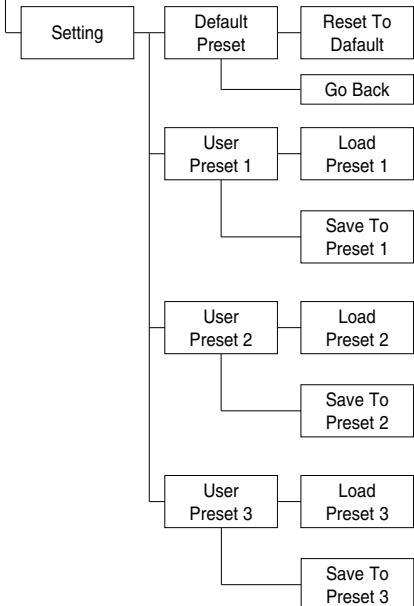
- 1) Press **OK** - the current settings appear on the display (On or Off).
- 2) Use the UP **▲** and DOWN **▼** keys to enable (On) or disable (Off) automatic stop/strobe closing in the event of Pan/Tilt position error.
- 3) Press **OK** to confirm the selection, or LEFT **◀** to keep current settings.



## DISPLAY

Used for automatically reduce brightness on the display after about 30 seconds in idle.

- 1) Press **OK** - the current settings appear on the display (On or Off).
- 2) Use the UP **▲** and DOWN **▼** keys to enable (On) or disable (Off) the decreasing of display brightness.
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep current settings.



## SETTING

Used to save 3 different settings of the items in the options menu and relative submenus.

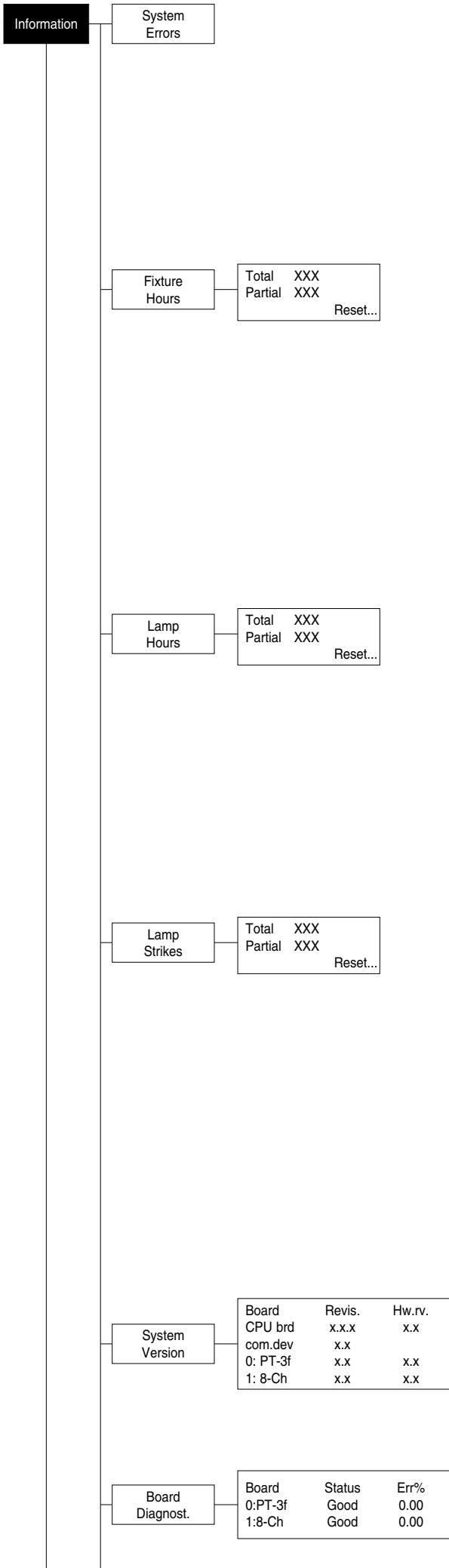
- 1) Press **OK** - "Default preset" appears on the display.
- 2) Use the UP **▲** and DOWN **▼** keys to select one of the following configurations:
  - Default preset (\*)
  - User preset 1
  - User preset 2
  - User Preset 3
- 3) Press **OK** - "Load preset X" appears on the display.
- 4) Use the UP **▲** and DOWN **▼** keys to select:
  - Load preset X to recall a previously stored configuration.
  - Save to preset X to store the current configuration.
 a confirmation message (Are you sure?) appears on the display.
- 5) Select YES to confirm the selection or NO to keep the current setting and return to the next higher level.

### (\*) DEFAULT PRESET

Used for restoring default values on all options menu items and relevant submenus.

- 1) Press **OK**, a confirmation message (Are you sure?) appears on the display.
- 2) Select YES to confirm the selection or NO to keep current setting.

OPTION	DEFAULT
Lamp DMX	On
Invert Pan	Off
Invert Tilt	Off
Swap Pan-Tilt	Off
Encoder Pan-Tilt	On
Fixed Wheel Shortcut	On
Shutter on error	Off
Display	On



## INFORMATION MENU

### SYSTEM ERRORS

Shows a list of warnings and messages relevant to errors occurred since the fixtures switching-on.

- 1) Pressing **OK** you are allowed to reset the SYSTEM ERRORS list. A confirmation message (Are you sure you want to clear error list ?) appears on the display.
- 2) Select YES to reset the list or NO to go back.

### Fixture Hours

Used for displaying projector operating hours (total and partial).

- 1) Press **OK** - Hours total and partial appears on the display.

#### Total counter

Counts the number of projector working life hours (from manufacture to date).

#### Partial counter

Counts the number of partial projector working life hours since the last reset to date.

- 2) Press **OK** to reset partial projector working hours a confirmation message (Are you sure?) appears on the display.
- 3) Select YES to reset partial projectors counter or NO to keep the current setting and return to the top menu level.

### Lamp Hours

Used for displaying the lamp working hours (total and partial).

- 1) Press **OK** - Hours total and partial appears on the display.

#### Total counter

Counts the number of projector working hours with the lamp on (from manufacture to date).

#### Partial counter

Counts the number of lamp working hours since the last reset to date.

- 2) Press **OK** to reset partial lamp working hours, a confirmation message (Are you sure ?) appears on the display.
- 3) Select YES to reset partial counter or NO to keep the current setting and return to the top menu level

### Lamp Strikes

Used for displaying the number of times the lamp was turned on (total and partial).

- 1) Press **OK** - the number of times the lamp was turned on (total and partial) appears on the display.

#### Total counter

Counts the number of times the lamp was turned on (from manufacture to date).

#### Partial counter

Counts the number of times the lamp was turned on since the last reset to date.

- 2) Press **OK** to reset partial lamp strikes hours, a confirmation message (Are you sure ?) appears on the display.
- 3) Select YES to reset partial counter or NO to keep the current setting and return to the top menu level

### SYSTEM VERSION

Used for displaying the software and hardware version of each board installed in the projector.

CPU brd (CPU board)

0: PT-3f (Pan / Tilt board)

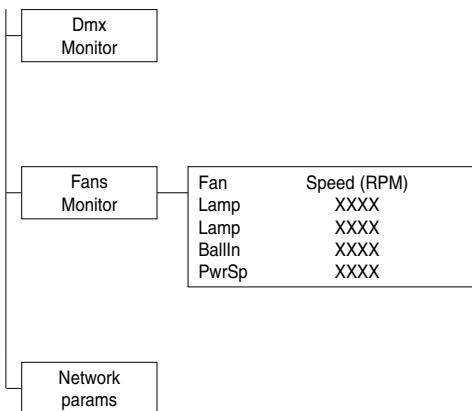
1: 8-Ch (8 channel board)

### BOARD DIAGNOSTIC

Used for displaying the status error of each board installed in the projector:

0: PT-3f (Pan / Tilt board)

1: 8-Ch (8 channel board)



## DMX MONITOR

Used for displaying the projector DMX channel level in bit (Val) and in percentage (Perc).

## FANS MONITOR

Used for displaying the speed of each fan installed in the projector:

Lamp (Lamp Fan)  
 Ball. IN (Ballast IN Fan)  
 PwrSp (Power Supply Fan)

## NETWORK PARAMS

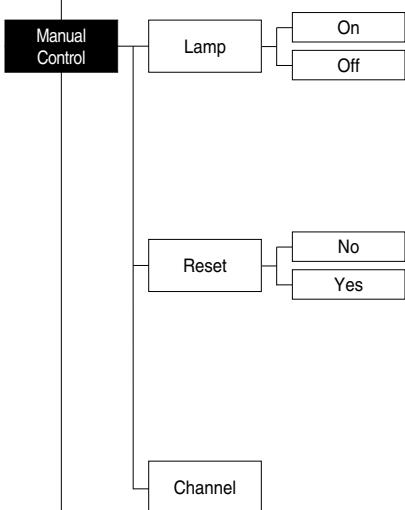
Allows the "Network" parameters of the projector to be displayed or:

**IP address:** Internet Protocol address (two projectors must not have the same IP address)

**IP mask:** 255.0.0.0

**Mac address:** Media Access Control: the projector's Ethernet Address

## MANUAL CONTROL



## LAMP

Used for turning lamp on and off from the projector control panel.

- 1) Press **OK** - the current settings appear on the display (On or Off).
- 2) Use the UP **▲** and DOWN **▼** keys to turn the lamp on (On) or off (Off)
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep current settings and return to the top level.

## RESET

Used for resetting the projector.

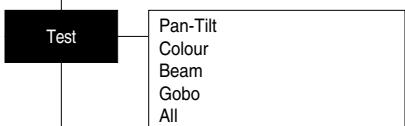
- 1) Press **OK** to reset the projectors, a confirmation message (Are you sure ?) appears on the display.
- 2) Select YES to starting reset the fixture or NO to keep the current setting and return to the top menu level.

## CHANNEL

Used for setting channel levels from the projector control panel.

- 1) Press **OK** - the first channel appears on the display.
- 2) Use the UP **▲** and DOWN **▼** keys to select the required channel:
- 3) Press **OK** and use the UP **▲** and DOWN **▼** keys to select the required DMX level (value between 0 and 255).
- 4) Press LEFT **◀** to return to the top menu level.

## TEST MENU



## TEST

Allows you to check the proper functioning of effects.

- 1) Press **OK** to return to the top menu level.
- 2) Use the UP **▲** and DOWN **▼** keys to select the required test.
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep current settings.

Test sequence:

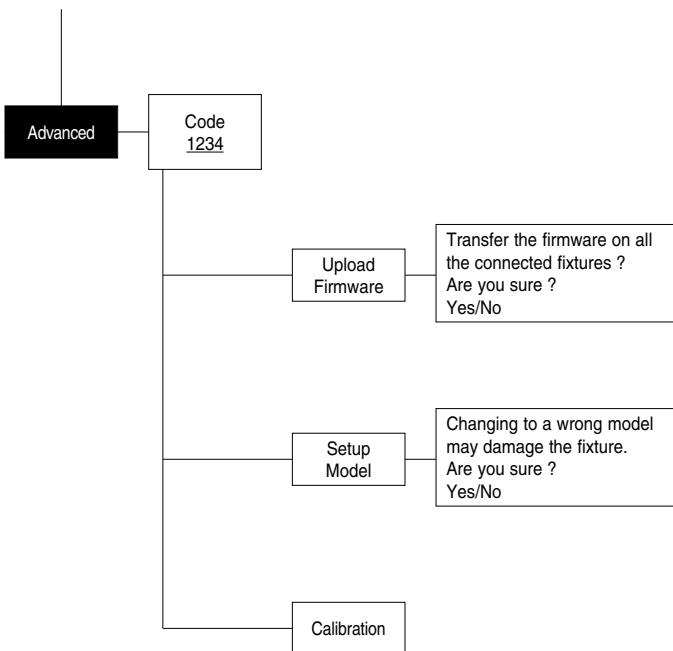
Pan - Tilt effects (Pan & Tilt)

Colour effects (Colour wheel)

Beam effects (Stopper-Strobe / Dimmer / Prism / Frost)

Gobo effects (Static gobo)

All effects



## ADVANCED MENU

To enable the "Advanced Menu" set up the "Access code" (1234) using the UP , DOWN , RIGHT keys.

Press - "Menu advanced" appears on the display

### UP LOAD FIRMWARE

Allows you to transfer the firmware from 1 fixture to all the connected fixtures.

- 1) Press , a confirmation message appears on the display.
- 2) Select YES to start the firmware loading or NO to keep the current setting and return to the top menu level

### SETUP MODEL

Allows you to change the default model of projector.

- 1) Press a confirmation message appears on the display.
- 2) Select YES to define the model of projector or NO to keep the current setting and return to the top menu level.

### CALIBRATION

Allows you to adjust effects from the control panel to obtain perfect uniformity between the projectors.

- 1) Press - "channels" appears on the display.
- 2) Using the UP and DOWN keys, select the effect you wish to regulate.
- 3) Press and use the RIGHT , UP and DOWN buttons to make the adjustment by setting a value between 0 and 255.
- 4) Press to confirm the selection or LEFT to keep current settings and return to the top level.

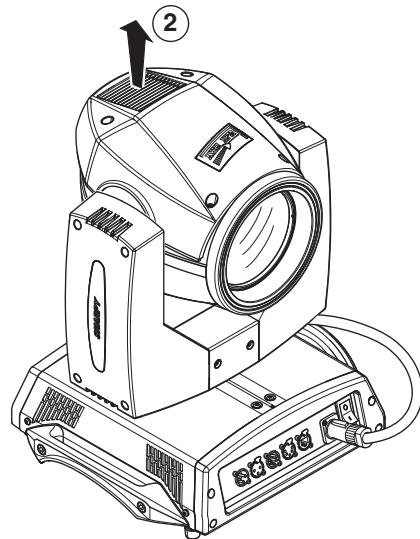
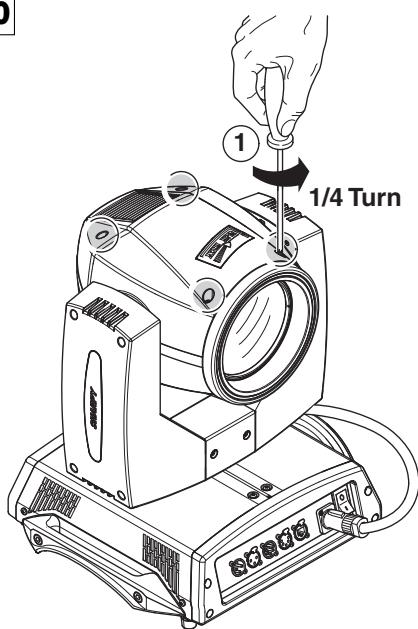
### FACTORY DEFAULT

Allows you to restore default values of all channels (128).

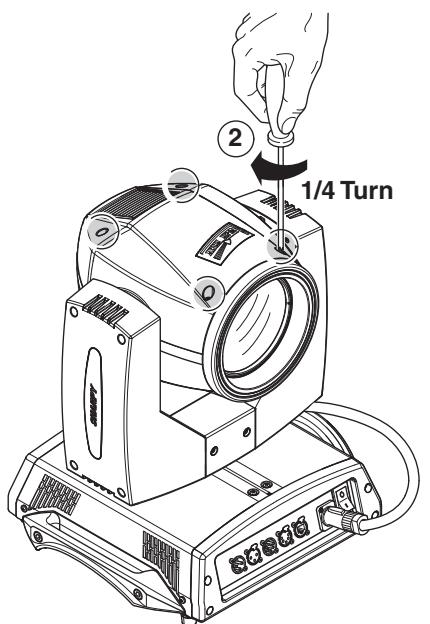
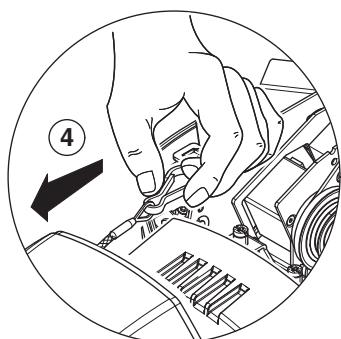
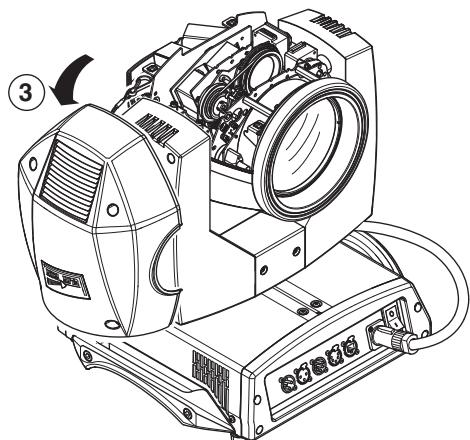
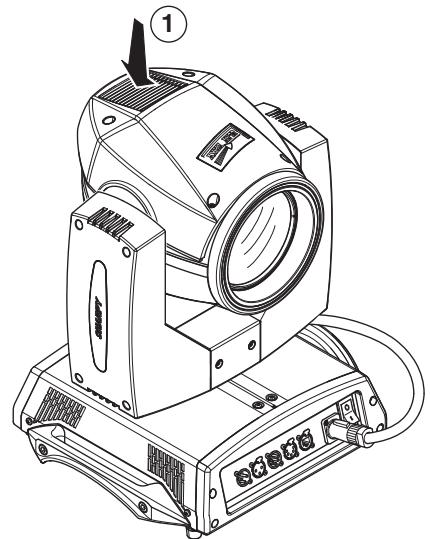
- 1) Press – a confirmation message appears on the display (Reset calibration to factory default ?).
- 2) Select YES to reset calibration to factory default or NO to keep the current setting and return to the top menu level.

## MAINTENANCE

10



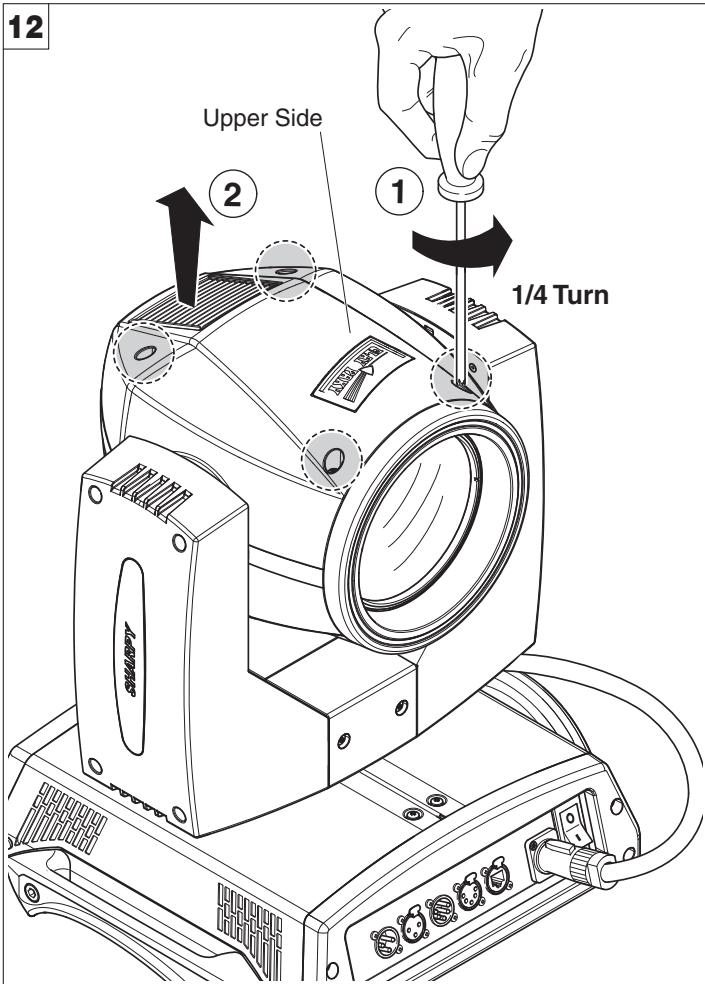
11



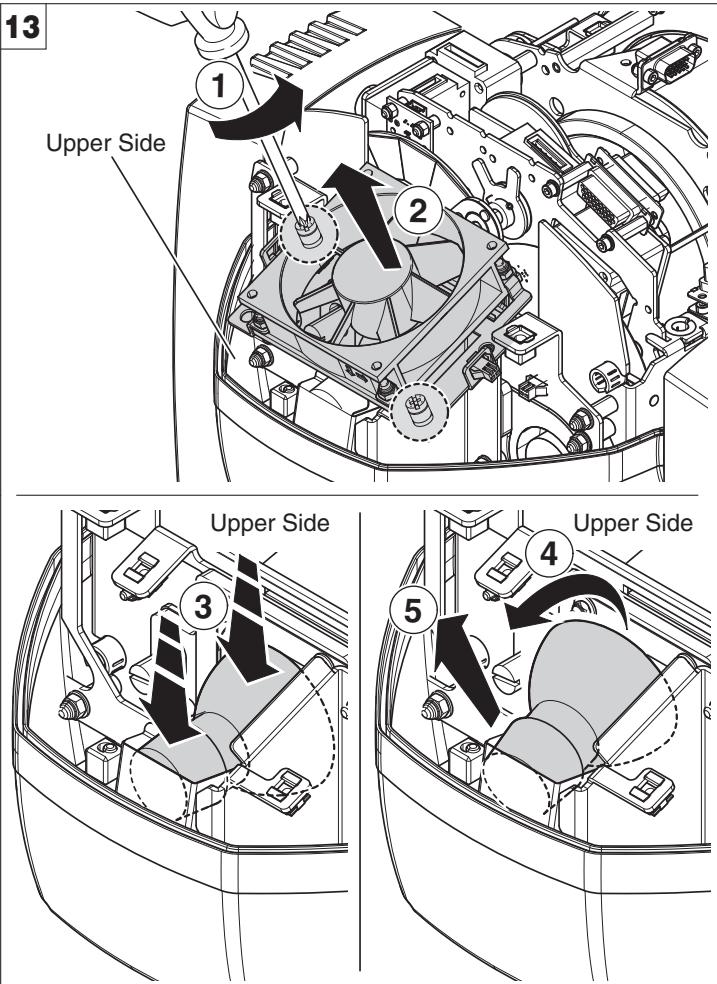
**Locking and releasing Pan and Tilt movements** - Refer to the instructions in the UNPACKING AND PREPARATION section.  
**Opening the head covers** - Fig. 10.

**Closing the head covers** - Fig. 11.

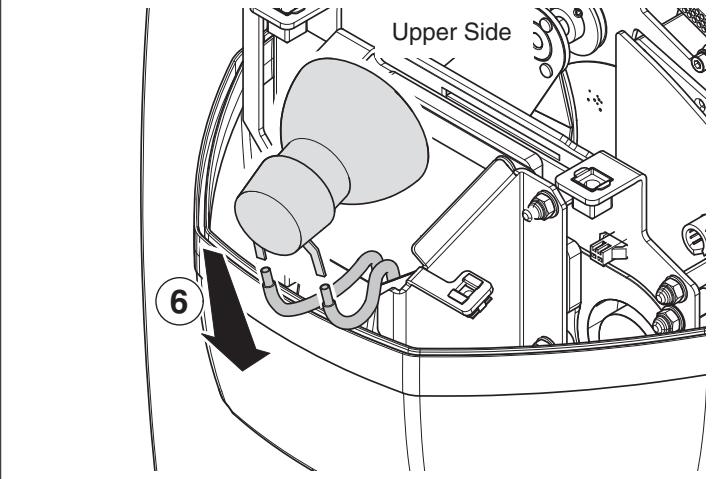
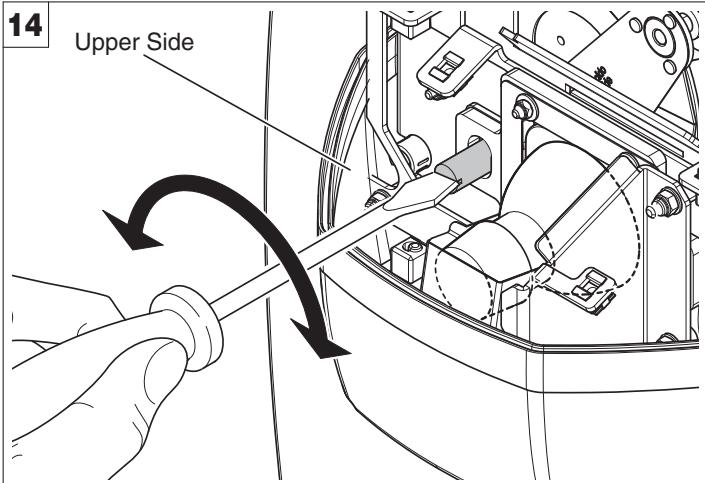
12



13



14



Opening and closing lamp compartment - Fig. 12

#### Lamp change - Fig 13

Take the new lamp out of its package and insert in the fitting.

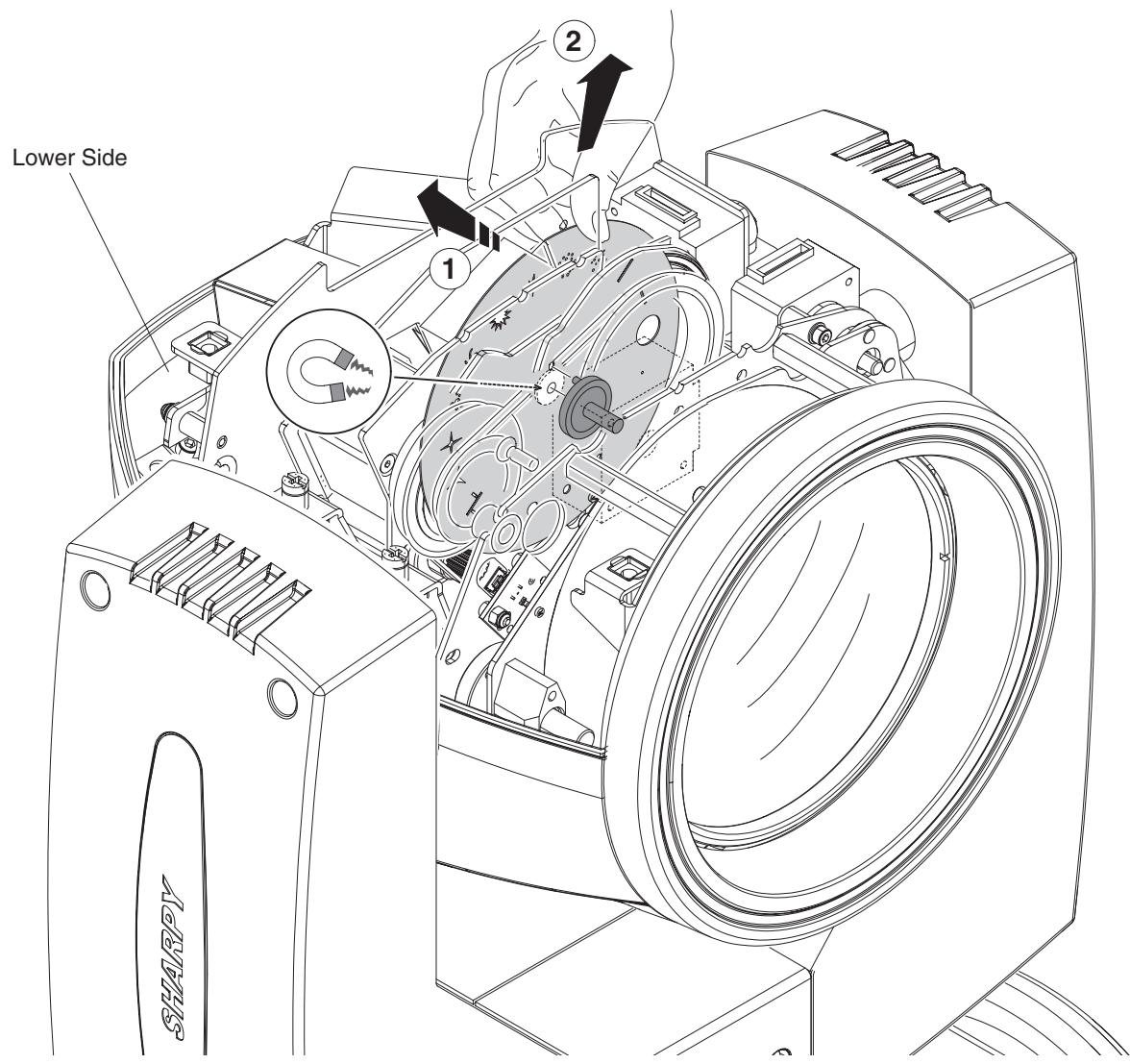
**WARNING: do not touch the lamp's envelope with bare hands. Should this happen, clean the bulb with a cloth soaked in alcohol and dry it with a clean, dry cloth.**

#### Lamp regulation - Fig. 14

To centre the lamp, turn the adjusting screw as shown in the figure.

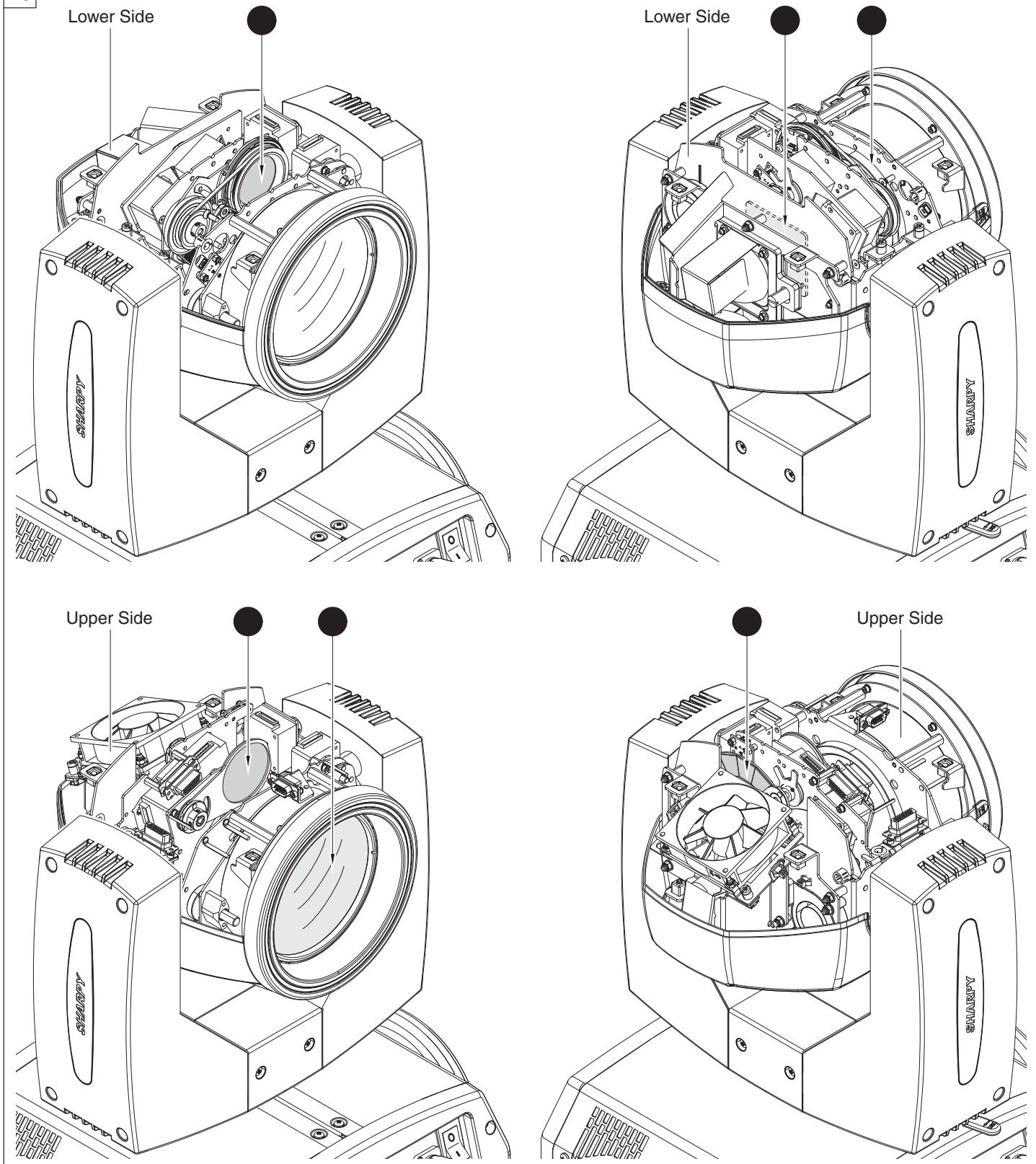
**WARNING: The lamp must be adjusted with the projector switched off. After adjusting, close the effects covers, switch on the projector and check that the adjustment has been correctly made. If necessary, switch off the projector, remove the effects covers and repeat lamp adjustment.**

**NOTE:** To adjust the lamp vertically (with regard to the Y axis) after having replaced it, it may be necessary to operate the **Calibration** in the **Menu Advanced** on the **Fixed Gobo Wheel** channel.



Replacing fixed gobos wheel - Fig. 15

**WARNING:** Before using personalised gobos wheel contact Clay Paky.

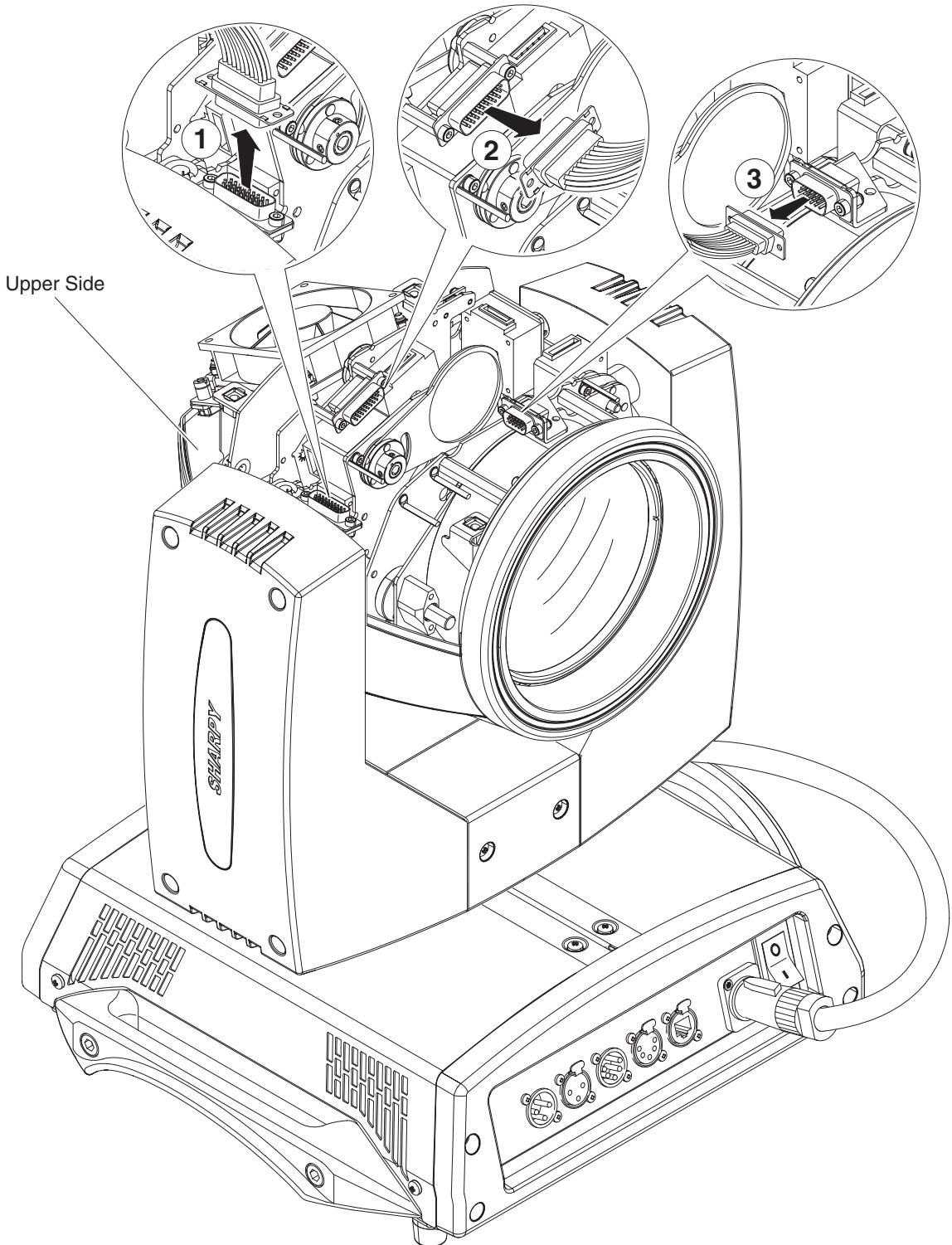


#### Periodical cleaning - Fig. 16

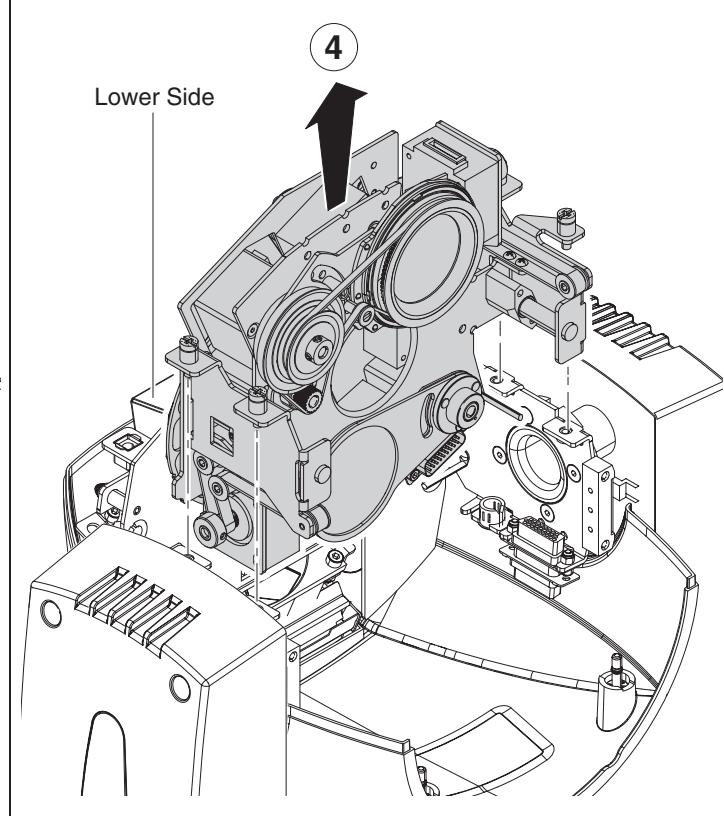
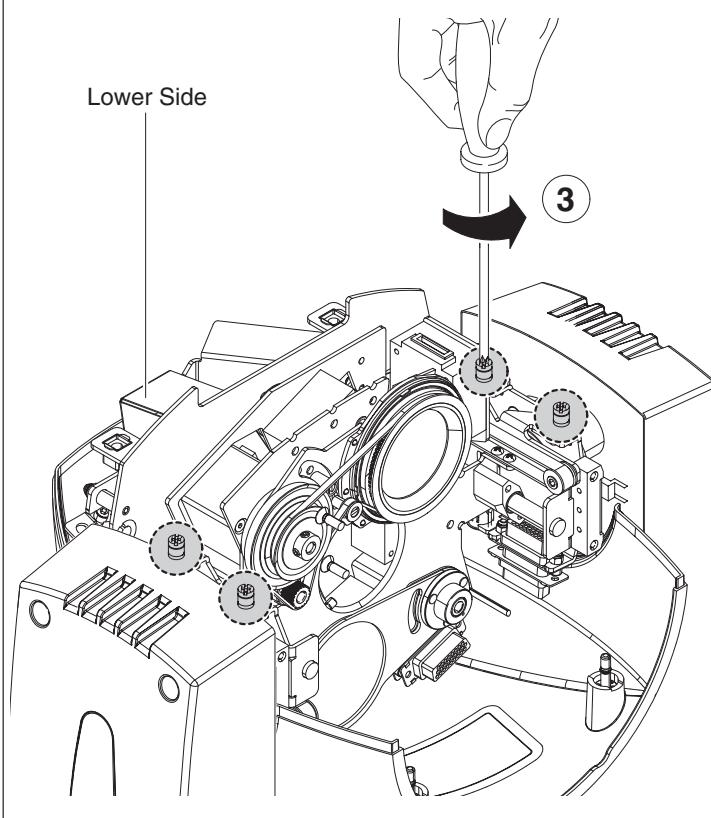
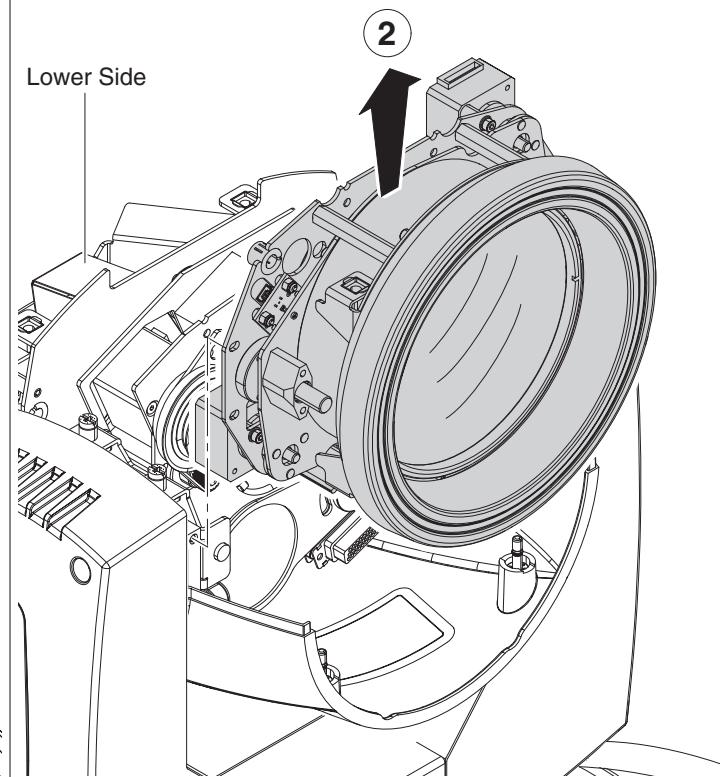
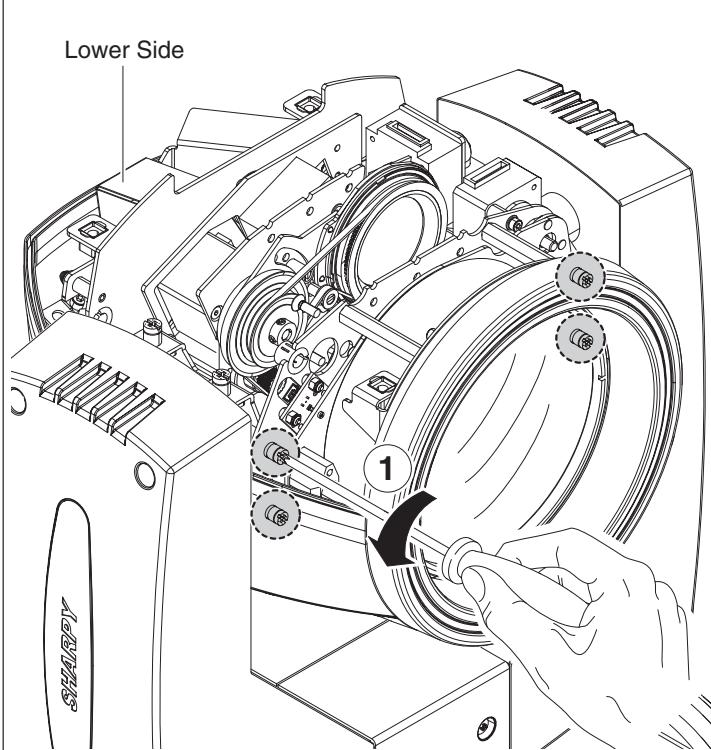
To ensure optimal operation and performance for a long time it is essential to periodically clean the parts subject to dust and grease deposits. The frequency with which the following operations are to be carried out depends on various factors, such as the amount of the effects and the quality of the working environment (air humidity, presence of dust, salinity, etc.).

Use a soft cloth dampened with any detergent liquid for cleaning glass to remove the dirt from the reflectors and filters. It is recommended that the projector undergoes an annual service by a qualified technician for special maintenance involving at least the following operations:

- General cleaning of internal parts.
- Restoring lubrication of all parts subject to friction, using lubricants specifically supplied by Clay Paky.
- General visual check of the internal components, cabling, mechanical parts, etc.
- Electrical, photometric and functional checks; eventual repairs.



**Extraction of the effect modules: Preliminary operations - Fig. 17**



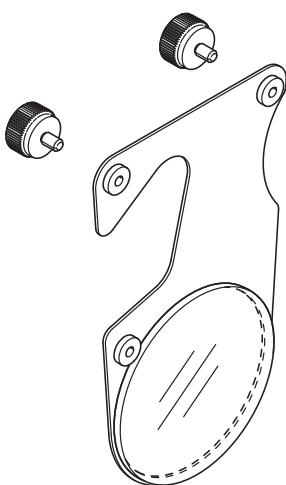
**Extraction of the effect modules - Fig. 18**

**IMPORTANT:** Grasp the modules using the support structure and not the details which could get damaged.

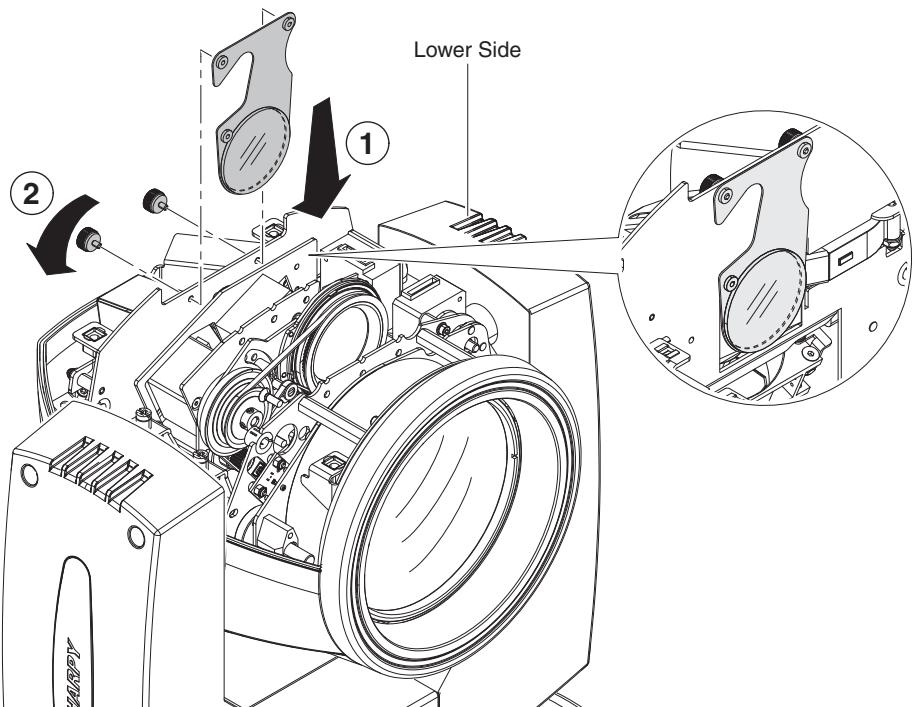
**Insertion of the effect modules:** Repeat the operations indicated in Fig. 17 and 18 in reverse order.

## OPTIONAL ACCESSORIES

19



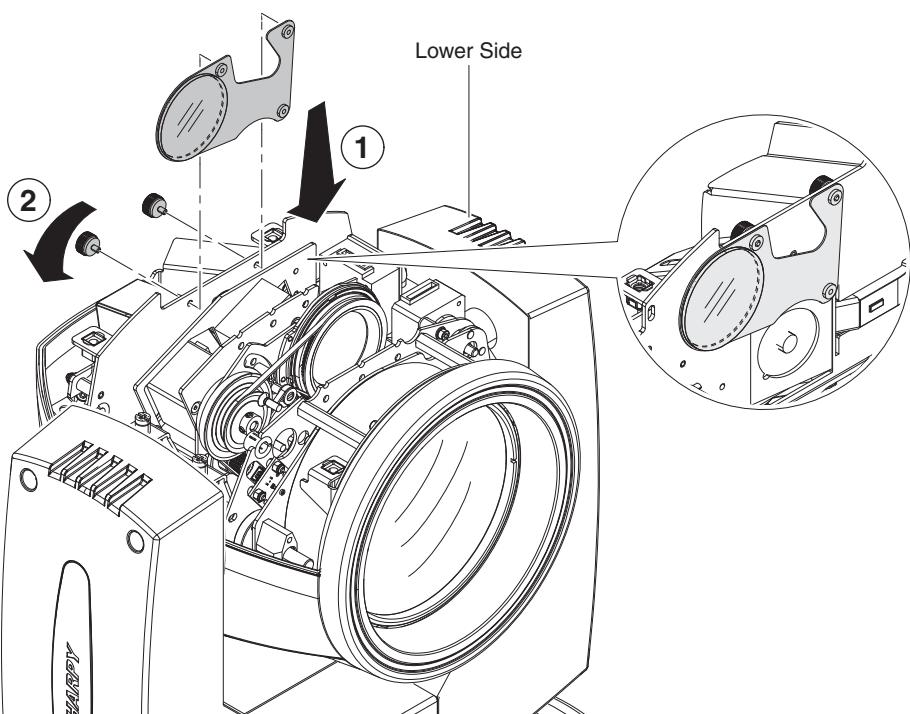
C61190



### Heat screen filter - Fig. 19

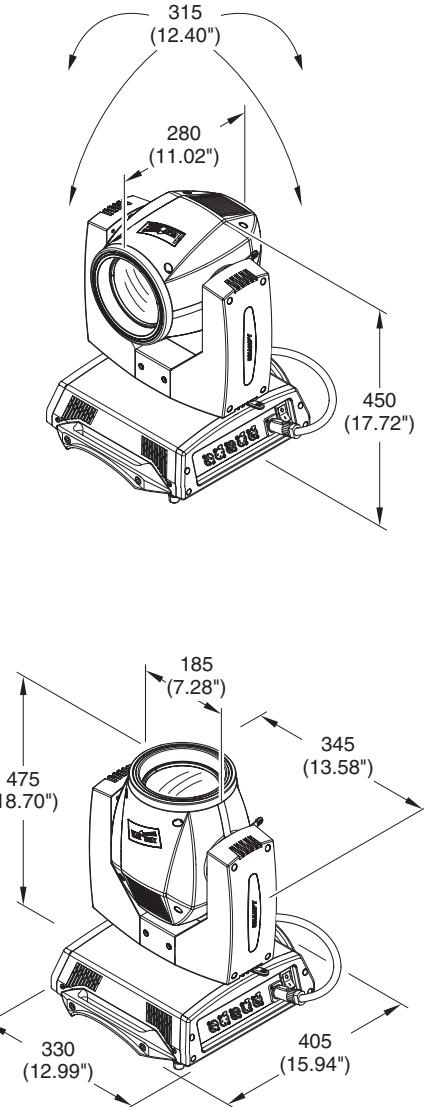
An optional filter kit is also available when the SHARPY projector is used in environments that do not meet the minimum allowed distance of **12 metres** from illuminated objects; when this kit is assembled, the projector can be used at a minimum distance of **8 metres** from illuminated objects.

20



### C61190 accessory can be placed inside the projector when not in use - Fig. 20

## TECHNICAL INFORMATION



**Power supplies available**  
115/230V 50/60Hz

**Input power:**  
350VA a 230V 50Hz.

### Lamp:

Lamp system with a short arc burner in a reflector

- Type MSD Platinum 5R (L10103)
- Output Lamp power: 189W
- Colour temperature 8000 K
- Luminous flux 7950lm
- Average life 2000 h
- Any working position

### Motors:

13 stepper motors, operating with microsteps, totally microprocessor controlled.

### Channels:

Max 20 control channels.

### Inputs:

- DMX 512

### Movable body:

- Movement by means of two stepper motors, controlled by microprocessor.
- Automatic repositioning of PAN and TILT after accidental movement not controlled by control unit.
- Travel:
  - PAN = 540°
  - TILT = 252°
- Maximum speeds:
  - PAN = 2.45 sec
  - TILT = 1.30 sec
- Resolution:
  - PAN = 2.11°
  - PAN FINE = 0.008°
  - TILT = 0.98°
  - TILT FINE = 0.004°

### IP20 protection rating:

- Protected against the entry of solid bodies larger than 12mm (0.47").
- No protection against the entry of liquids.

### CE Marking:

In conformity with the European Union Low Voltage Directive 2006/95/CE and Electromagnetic compatibility Directive 2004/108/CE.

### Safety Devices:

- Bipolar circuit breaker with thermal protection.
- Automatic break in power supply in case of overheating or failed operation of cooling system.

### Cooling:

Forced ventilation with axial fans.

### Body:

- Aluminium structure with die-cast plastic cover.
- Two side handles for transportation.
- Device locking PAN and TILT mechanisms for transportation and maintenance.

### Working position

Functioning in any position.

### Weights:

about 16 Kg (35lbs 3ozs).

## CAUSE AND SOLUTION OF PROBLEMS

THE PROJECTOR WILL NOT SWITCH ON			PROBLEMS	
ELECTRONICS NON-OPERATIONAL				
DEFECTIVE PROJECTION				
REDUCED LUMINOSITY				
POSSIBLE CAUSES		CHECKS AND REMEDIES		
●	No mains supply.	Check the power supply voltage.		
●	● Lamp exhausted or defective.	Replace the lamp. (See instructions).		
●	Signal transmission cable faulty or disconnected.	Replace the cables.		
●	Incorrect addressing.	Check addresses (see instructions).		
●	Fault in the electronic circuits.	Call an authorised technician.		
●	Lenses or reflector broken	Call an authorised technician.		
●	Dust or grease deposited.	Clean (see instructions).		

## CHANNEL FUNCTION

### SHARPY

CHANNEL	CHANNEL MODE	
	STANDARD	VECTOR
1	COLOUR WHEEL	COLOUR WHEEL
2	STOP / STROBE	STOP / STROBE
3	DIMMER	DIMMER
4	STATIC GOBO CHANGE	STATIC GOBO CHANGE
5	PRISM INSERTION	PRISM INSERTION
6	PRISM ROTATION	PRISM ROTATION
7	EFFECTS MOVEMENT	EFFECTS MOVEMENT
8	FROST	FROST
9	FOCUS	FOCUS
10	PAN	PAN
11	PAN FINE	PAN FINE
12	TIILT	TIILT
13	TIILT FINE	TIILT FINE
14	FUNCTION	FUNCTION
15	RESET	RESET
16	LAMP CONTROL (with Option "Lamp Dmx" ON)	LAMP CONTROL (with Option "Lamp Dmx" ON)
17		PAN - TIILT TIME
18		COLOUR TIME
19		BEAM TIME
20		GOBO TIME

NOTE: On conclusion of resetting in case of absence of DMX signal, Pan & Tilt move to the "Home" position (Pan 50% - Tilt 50%) all the others channels stay at 0%.

• COLOUR WHEEL - channel 1



BIT	%	EFFECT
255	100	FAST ROTATION (160 rpm)
128	50.0	SLOW ROTATION (0.2 rpm)
124	48.7	BLUE + WHITE
120	47.0	BLUE
116	45.5	CTB 8000 + BLUE
111	43.7	CTB 8000
107	42.0	CTO 190 + CTB 8000
103	40.5	CTO 190
99	38.7	CTO 260 + CTO 190
94	36.0	CTO 260
90	35.0	CYAN + CTO 260
86	33.7	CYAN
82	32.0	MAGENTA + CYAN
77	30.0	MAGENTA
73	28.7	YELLOW + MAGENTA
69	27.0	YELLOW
64	25.0	PINK + YELLOW
60	23.7	PINK
56	22.0	LAVENDER + PINK
52	20.5	LAVENDER
47	18.2	LIGHT GREEN + LAVENDER
43	16.7	LIGHT GREEN
39	15.0	GREEN + LIGHT GREEN
35	13.7	GREEN
30	11.7	AQUAMARINE + GREEN
26	10.0	AQUAMARINE
22	8.7	ORANGE + AQUAMARINE
18	7.0	ORANGE
13	5.0	RED + ORANGE
9	3.7	RED
5	2.0	WHITE + RED
0	0.0	WHITE

• STOP / STROBE - channel 2



BIT	%	EFFECT
252 - 255	98.7 - 100	OPEN
239 - 251	93.7 - 98.2	RANDOM FAST STROBE
226 - 238	88.7 - 93.2	RANDOM MEDIUM STROBE
213 - 225	83.7 - 88.2	RANDOM SLOW STROBE
208 - 212	81.7 - 83.2	OPEN
207	81.2	FAST PULSATION (360 bpm)
108	42.5	SLOW PULSATION (30 bpm)
104 - 107	41.0 - 42.0	OPEN
103	40.5	FAST STROBE (12 flash/sec)
4	1.7	SLOW STROBE (1 flash/sec)
0 - 3	0.0 - 1.2	CLOSED

• DIMMER - channel 3



BIT	%	EFFECT
255	100	
		0%-100%: 0.02 sec
0	0.0	

• STATIC GOBO CHANGE - channel 4

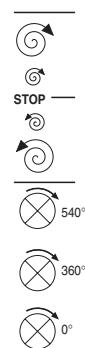


BIT	%	EFFECT
255	100	GOBO 16 SHAKE FAST SPEED (600 bpm)
250	98.0	GOBO 16 SHAKE, SLOW SPEED (24 bpm)
249	97.5	GOBO 15 SHAKE FAST SPEED
244	95.5	GOBO 15 SHAKE, SLOW SPEED
243	95.0	GOBO 14 SHAKE FAST SPEED
237	93.0	GOBO 14 SHAKE, SLOW SPEED
236	92.5	GOBO 13 SHAKE FAST SPEED
231	90.5	GOBO 13 SHAKE, SLOW SPEED
230	90.0	GOBO 12 SHAKE FAST SPEED
224	88.0	GOBO 12 SHAKE, SLOW SPEED
223	87.5	GOBO 11 SHAKE FAST SPEED
218	85.5	GOBO 11 SHAKE, SLOW SPEED
217	85.0	GOBO 10 SHAKE FAST SPEED
212	83.2	GOBO 10 SHAKE, SLOW SPEED
211	83.0	GOBO 9 SHAKE FAST SPEED
205	80.5	GOBO 9 SHAKE, SLOW SPEED
204	80.0	GOBO 8 SHAKE FAST SPEED
199	78.0	GOBO 8 SHAKE, SLOW SPEED
198	77.5	GOBO 7 SHAKE FAST SPEED
192	75.0	GOBO 7 SHAKE, SLOW SPEED
191	74.7	GOBO 6 SHAKE FAST SPEED
186	73.0	GOBO 6 SHAKE, SLOW SPEED
185	72.5	GOBO 5 SHAKE FAST SPEED
180	70.5	GOBO 5 SHAKE, SLOW SPEED
179	70.0	GOBO 4 SHAKE FAST SPEED
173	68.0	GOBO 4 SHAKE, SLOW SPEED
172	67.5	GOBO 3 SHAKE FAST SPEED
167	65.5	GOBO 3 SHAKE, SLOW SPEED
166	65.0	GOBO 2 SHAKE FAST SPEED
160	63.0	GOBO 2 SHAKE, SLOW SPEED
159	62.5	FAST ROTATION (60 rpm)
118	46.2	SLOW ROTATION (5 rpm)
114-117	44.7-46.0	STOP
113	44.2	SLOW ROTATION (5 rpm)
72	28.2	FAST ROTATION (60 rpm)
68-71	26.7-28.0	GOBO 17
64-67	25.0-26.2	GOBO 16
60-63	23.7-24.7	GOBO 15
56-59	22.0-23.2	GOBO 14
52-55	20.5-21.7	GOBO 13
48-51	18.7-20.0	GOBO 12
44-47	17.0-18.2	GOBO 11
40-43	15.5-16.7	GOBO 10
36-39	14.0-15.0	GOBO 9
32-35	12.5-13.7	GOBO 8
28-31	11.0-12.0	GOBO 7
24-27	9.5-10.5	GOBO 6
20-23	8.0-9.0	GOBO 5
16-19	6.2-7.5	GOBO 4
12-15	4.7-6.0	GOBO 3
8-11	3.2-4.2	GOBO 2
4-7	1.7-3.0	GOBO 1
0-3	0.0-1.2	WHITE

• PRISM INSERTION - channel 5

BIT	%	EFFECT
255	100	PRISM INSERTED 0%-100%: 0.36 sec
128	50.0	
127	49.7	
0	0.0	PRISM EXCLUDED

• PRISM ROTATION - channel 6



BIT	%	EFFECT
255	100	FAST ROTATION (43 rpm)
193	75.5	SLOW ROTATION (1.1 rpm)
191-192	74.7 - 75.0	STOP
190	74.2	SLOW ROTATION (1.1 rpm)
128	50.0	FAST ROTATION (43 rpm)
127	49.7	POSITION 540°
105	41.7	POSITION 450°
84	33.0	POSITION 360°
63	24.7	POSITION 270°
42	16.2	POSITION 180°
21	8.2	POSITION 90°
0	0.0	POSITION 0°

• EFFECTS MOVEMENT - channel 7

BIT	%	EFFECT
255	100	
0	0.0	0%-100%: 0.33 sec

• FROST - channel 8



BIT	%	EFFECT
255	100	FROST INSERTED
0	0.0	0%-100%: 0.12 sec
0	0.0	FROST EXCLUDED

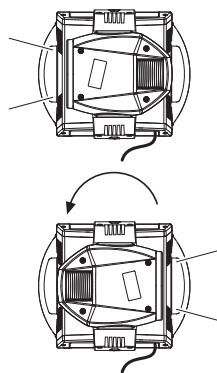
• FOCUS - channel 9



BIT	%	EFFECT
255	100	NEAR
0	0.0	0%-100%: 1.11 sec
0	0.0	DISTANT

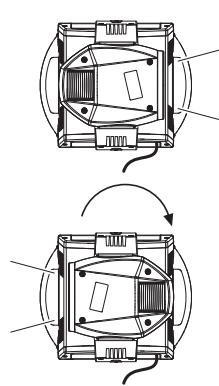
• PAN - channel 10

Operation with option InvertPan  $\diamond$  Off  
(Tilt conventionally represented at 14% and option Invert Tilt  $\diamond$  Off)



BIT	%
255	100
0	0.0

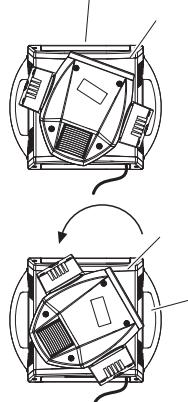
Operation with option InvertPan  $\diamond$  On  
(Tilt conventionally represented at 14% and option Invert Tilt  $\diamond$  Off)



BIT	%
255	100
0	0.0

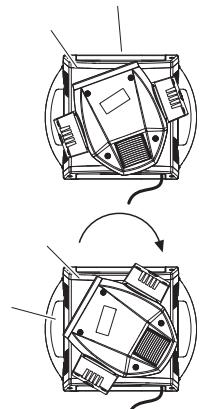
• PAN FINE - channel 11

Operation with option InvertPan  $\diamond$  Off  
(Tilt conventionally represented at 14% and option Invert Tilt  $\diamond$  Off)



BIT	%
255	100
0	0.0

Operation with option InvertPan  $\diamond$  On  
(Tilt conventionally represented at 14% and option Invert Tilt  $\diamond$  Off)

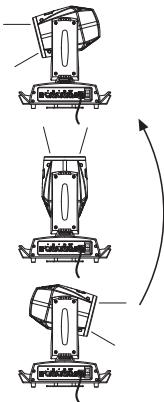


BIT	%
255	100
0	0.0

• TILT - channel 12

Operation with option Invert Tilt  $\downarrow$  Off

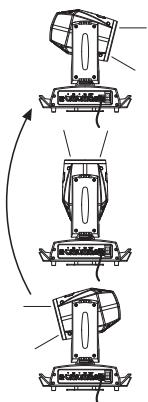
(Pan conventionally represented at 0% and option Invert Pan  $\downarrow$  Off)



BIT	%
255	100
128	50.0
0	0.0

Operation with option Invert Tilt  $\downarrow$  On

(Pan conventionally represented at 0% and option Invert Pan  $\downarrow$  Off)

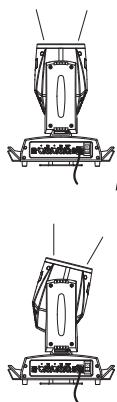


BIT	%
255	100
128	50.0
0	0.0

• TILT FINE - channel 13

Operation with option Invert Tilt  $\downarrow$  Off

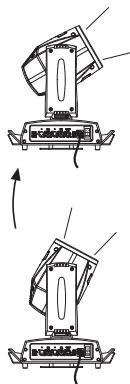
(Pan conventionally represented at 0% and option Invert Pan  $\downarrow$  Off)



BIT	%
255	100
0	0.0

Operation with option Invert Tilt  $\downarrow$  On

(Pan conventionally represented at 0% and option Invert Pan  $\downarrow$  Off)



BIT	%
255	100
0	0.0

• FUNCTION - channel: 14

BIT	%	EFFECT
255	100	
...	...	UNUSED RANGE
63	24.7	
51-62	20.0-24.2	LINEAR (Default) ————— DIMMER CURVE FUNCTION
38-50	14.7-19.5	CONVENTIONAL ————— FUNCTION
25-37	9.7-14.2	NORMAL ————— PAN-TILT FUNCTION
12-24	4.7-9.5	FAST (Default) ————— FUNCTION
0-11	0.0-4.2	UNUSED RANGE

The functions are activated passing through the unused range and staying 5 seconds in necessary level.

• RESET - channel: 15

BIT	%	EFFECT
255	100	COMPLETE RESET
...	...	Complete reset is activated passing through the unused range and staying 5 seconds in complete reset levels.
128	50.0	
127	49.7	COMPLETE RESET PAN / TILT RESET
...	...	Pan / Tilt reset is activated passing through the unused range and staying 5 seconds in Pan / Tilt reset levels.
77	30.0	PAN / TILT RESET
76	29.7	EFFECTS RESET
...	...	Effects reset is activated passing through the unused range and staying 5 seconds in Effects reset levels.
26	10.0	EFFECTS RESET
25	9.7	
0	0.0	UNUSED RANGE

• LAMP CONTROL (only with option LAMP DMX On) - channel: 16

IMPORTANT: SHARPY is not provided with hot restrike ignition



BIT	%	EFFECT
255	100	LAMP ON
...	...	Lamp switch-on passing through the unused range and staying 5 sec in Lamp ON levels.
101	39.5	LAMP ON
100	39.0	LAMP OFF
...	...	Lamp switch off passing through the unused range and staying 5 s in Lamp OFF levels.
26	10.0	LAMP OFF
25	9.7	
0	0.0	UNUSED RANGE

Operation with option Invert Tilt  $\downarrow$  On

(Pan conventionally represented at 0% and option Invert Pan  $\downarrow$  Off)

## TIMING CHANNELS

	Timing Channel	Channel function
17	Pan - Tilt time	Pan - Tilt - (Pan fine - Tilt fine)
18	Colour time	Colour wheel
19	Beam time	Dimmer - Frost - Prism
20	Gobo time	Static Gobo

## TIME TABLE

BIT	Seconds										
0	Full	43	8.6	86	24	129		172		216	170
1	0.2	44	8.8	87		130	41	173	58	217	
2	0.4	45	9	88		131		174		218	
3	0.6	46	9.2	89	25	132	42	175		219	180
4	0.8	47	9.4	90		133		176	59	220	
5	1	48	9.6	91	26	134		177		221	
6	1.2	49	9.8	92		135	43	178	60	222	190
7	1.4	50	10	93		136		179		223	
8	1.6	51	10.2	94	27	137	44	180		224	200
9	1.8	52	10.4	95		138		181	65	225	
10	2	53	10.6	96	28	139		182		226	
11	2.2	54	11	97		140	45	183		227	210
12	2.4	55		98		141		184	70	228	
13	2.6	56	12	99	29	142	46	185		229	
14	2.8	57		100		143		186	75	230	220
15	3	58		101		144		187		231	
16	3.2	59	13	102	30	145	47	188		232	230
17	3.4	60		103		146		189		233	
18	3.6	61	14	104	31	147	48	190		234	
19	3.8	62		105		148		191	85	235	240
20	4	63		106		149		192		236	
21	4.2	64	15	107	32	150	49	193		237	250
22	4.4	65		108		151		194		238	
23	4.6	66	16	109	33	152		195		239	
24	4.8	67		110		153	50	196	95	240	260
25	5	68		111		154		197		241	
26	5.2	69	17	112	34	155	51	198	100	242	270
27	5.4	70		113		156		199		243	
28	5.6	71	18	114	35	157		200		244	
29	5.8	72		115		158	52	201	110	245	280
30	6	73		116		159		202		246	
31	6.2	74	19	117	36	160		203		247	290
32	6.4	75		118		161	53	204	120	248	
33	6.6	76	20	119		162		205		249	
34	6.8	77		120	37	163	54	206		250	300
35	7	78		121		164		207	130	251	
36	7.2	79	21	122	38	165		208		252	
37	7.4	80		123		166		209	140	253	
38	7.6	81		124		167		210		254	
39	7.8	82	22	125		168	56	211		255	Follow cue Data
40	8	83		126		169		212			
41	8.2	84		127		170		213			
42	8.4	85	23	128	40	171	57	214			

